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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/663,030 09/15/00 SCHRODER

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PM82/0629

EXAMINER

DEPUMPO, D

ART UNIT

PAPER NUMBER

3611

DATE MAILED:

06/29/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/663,030

Applicant(s)  
Schroder et al.

Examiner  
Daniel G. DePumpo

Art Unit  
3611



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on May 16, 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above, claim(s) 10-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 26-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4 20) ☐ Other: \_\_\_\_\_

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1. Applicant's election without traverse of the invention of Group I in Paper No. 6 is acknowledged.
2. Upon further review, it is determined that election of species is also required, as set forth below.
3. This application contains claims directed to the following patentably distinct species of the claimed invention:

- A fig. 2
- B fig. 13
- C fig. 14A-D
- D fig. 16.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 appears to be generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations

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of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. During a telephone conversation with Keith J. Murphy on June 25, 2001 a provisional election was made without traverse to prosecute the invention of species C (claims 1-9 and 26-32 allegedly readable thereon). Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 27-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant has indicated that claims 27-32 (among others) read on the elected species of figs. 14A-D. However, claim 27 recites "at least one piezosensitive element coupled to the hub". This claim appears to read on the non-elected species of fig. 2. In view of applicant's assertions that this claim reads on the elected species of figs. 14A-D, the scope of this claim can not be determined.

Also, in claim 27, "the hub" lacks antecedent basis.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto.

Yamamoto discloses a steering system having the structure as claimed. The system includes a shaft 2, a sensor 35, a controller (i.e, the ECU depicted in fig. 2), a steering wheel 3 and a motor 15.

10. Claims 1, 2 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Brier.

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Brier discloses a steering system having the structure as claimed. The system includes a shaft 14, a sensor 48, an amplifier 50, a controller 52 (or LS1, LS2), a steering wheel 10 and a motor 36.

11. Claims 1, 2 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Taig.

Taig discloses a steering system having the structure as claimed. The system includes a shaft 16, a sensor 94, a controller 98, a slot 76 and a motor 104.

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brier in view of Brosh et al.

As set forth above, Brier teaches substantially all that is claimed. In fig. 2, Brier shows what appears to be a common Wheatstone bridge, however, this is not specifically disclosed. Brier also discloses the use of resistor strain gauges 48, but does disclose whether they are piezoresistors. Brosh, however, discloses a similar strain gauge sensor including piezoresistors arranged in a Wheatstone bridge. It would have been obvious to arrange the resistors of Brier in a Wheatstone bridge, as taught by Brosh since this is well known (see Brosh col. 2, line 50). It would have also been obvious to use piezoresistors, since Brier is silent regarding a preferred type

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of resistor and since Brosh discloses that these are desirable and are commercially available (see Brosh col. 2, lines 20-37).

14. Claims 3-8 and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taig in view of Brosh et al.

As set forth above, Taig teaches substantially all that is claimed. Taig does not disclose the use of a Wheatstone bridge. Taig discloses the use of a resistor strain gauge 94, but does not disclose whether it is a piezoresistor. Brosh, however, discloses a similar strain gauge sensor including piezoresistors arranged in a Wheatstone bridge. It would have been obvious to arrange the resistors of Taig in a Wheatstone bridge, as taught by Brosh since this is well known (see Brosh col. 2, line 50). It would have also been obvious to use piezoresistors, since Taig is silent regarding a preferred type of resistor and since Brosh discloses that these are desirable and are commercially available (see Brosh col. 2, lines 20-37).

Regarding claim 27, the piezosensitive element, as taught by the combination of Taig and Brosh, is considered to be "coupled to the hub" to the same degree as that of the elected species of figs. 14A-D.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hashimoto, Nakashima, Tanaka et al., Hirota et al., Madni et al., Runyan, Buike et al. and Satoh et al. disclose various devices having features in common with the instant invention.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel G. DePumpo whose telephone number is (703) 308-1113.



**DANIEL G. DePUMPO**  
**PRIMARY EXAMINER**

dgd

June 26, 2001